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Administrator,

[HYPERLINK "x-apple-data-detectors://4"] ORD will host Louisiana DEQ Secretary Dr. Chuck Carr Brown and his executive team and Florida DEP's David Whiting to tour our lab in Gulf Breeze, FL. The purpose of this visit is for ORD to gain further insight into states' most pressing science needs, and for the states to gain a better understanding of ORD's science capabilities and research work conducted at the facility. Research presentations include Support to State-Level Numeric Nutrient Criteria Development; [HYPERLINK "https://www.epa.gov/national-aquatic-resource-surveys"]; [HYPERLINK "https://www.epa.gov/water-research/ecosystem-services-scenario-assessment-using-epa-h2o"]; as well as a Gulf Restoration update.

Next week I look forward to meeting with Idaho Congressman Mike Simpson and staff to discuss the ongoing collaboration of ORD and Idaho National Laboratory on the Water Security Test Bed. Congressman Simpson recently toured the facility and is very enthusiastic about our research and its impact for the water industry.

Hot issues

PFAS: ORD shares analysis of Chemours test well water samples with NCDEQ

On September 14, ORD shared results with the North Carolina Department of Environmental Quality (NCDEQ) of its lab analysis of water samples from the Chemours Fayetteville (N.C.) Works Plant. Many of the water samples came from test wells on the Chemours property. The samples were collected by Chemours staff under the observation of staff from NCDEQ. ORD tested the samples for 16 chemical compounds including legacy and new generation perfluoroalkyl substances (PFAS), such as GenX; perfluorooctanoic acid (PFOA); and PFESA (perfluoroalkyl ether sulfonic acid) byproduct 1 and byproduct 2. NCDEQ plans to review and publically release the data. This lab analysis is a continuation of ORD's work at the request of NCDEQ. Throughout the summer ORD scientists have been analyzing wastewater, surface water, groundwater, and treated drinking water samples from the Cape Fear River Basin to determine the presence and concentration of GenX and other PFAS in the samples. [HYPERLINK "https://deq.nc.gov/news/hot-topics/genx-investigation"].

Superfund/PFAS
On September 19, the Region 2 Superfund and Technology Liaison met with the NY State Department of Environmental Conservation to discuss the [HYPERLINK "https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0202702"] remedial investigation in Hoosick Falls, NY. EPA provided hydrogeologic support at the newly listed NPL site, which is contaminated with per- and polyfluoroalkyl substances (PFAS), primarily perfluorooctanoic acid (PFOA).

Harmful Algal Bloom Technical assistance in Struthers, OH
The City of Struthers has detected cyanotoxins from a harmful algal bloom and is planning to adjust its drinking water treatment processes (i.e., disinfectant approaches). The city is concerned with how these treatment changes may affect the distribution system and ORD is providing advice on the effects of this potential treatment change.

IRIS Assessment Plans Available for Public Comment
On September 18th, the IRIS program announced the availability of three IRIS Assessment Plans (IAP) for public comment. The three assessment plans are for nitrate/nitrite, chloroform, and ethylbenzene. The public comment period will last for 30 days and will close on October 18th, 2017.

Science Advisory Board Meeting
On September 27 – 28, a Science Advisory Board Chemical Assessment Advisory Committee (CAAC) peer consultation meeting will be held in Arlington, VA. During the meeting a discussion on the implementation of systematic review within the IRIS program will take place and the IRIS program will present draft assessment plans for chloroform, nitrate/nitrite, and ethylbenzene.

Upcoming public events

Computational Toxicology Chemistry Dashboard to the Minnesota Department of Health
On September 27 ORD will provide a demonstration of the Computational Toxicology Chemistry Dashboard to the Minnesota Department of Health (MN DOH). ORD met with MN DOH in August so that they could outline their needs for using EPA data and tools to inform their chemical risk assessments and this demonstration is a follow-up to that meeting. MN DOH is interested in using ORD's data, computational models, and dashboard tools for evaluating chemicals of emerging concern in their chemical risk assessment process.

American Chemistry Council Long-Range Research Initiative Strategic Science Team meeting
On October 3 ORD staff will participate in an American Chemistry Council Long-Range Research Initiative Strategic Science Team (LRI SST) meeting to discuss exposure science. ORD will provide an overview of high-throughput exposure research, with the goal of helping LRI SST members identify LRI projects that have the potential to make the most impact. These projects will contribute to the strategic goals of improving the understanding of consumer exposures and advancing risk-based decision making in product stewardship and TSCA.

ORD collaborates with Philadelphia and Region 3 to Launch Rad Contamination Case Study
Following a large radiological incident such as a dirty bomb detonation or a nuclear accident, the contamination will likely spread in the atmosphere due to meteorological forces, and on the ground due to precipitation. The air and the water transport are interdependent as deposition from the air can end up in surface water flows. Understanding exposure and designing characterization and remediation strategies is greatly aided by understanding where the contamination may move. However, little is

understood yet about stormwater transport or the integration of atmospheric plume models with stormwater models for radiological contamination. Building upon the EPA-led, 2010 Liberty RadEx National Planning Exercise that involved a dirty bomb detonation scenario in downtown Philadelphia, ORD is collaborating with the City of Philadelphia and Region 3 Emergency Planners to launch a case study of modeling the urban transport of radiological contamination. The project aims to expand existing stormwater and river models developed by the city to include modeling flow of water in streets and defining washoff coefficients for radiological contaminates. The proposed work is expected to document the process of integrating air model radiological deposition maps and stormwater contamination modeling to aid in planning for and responding to a radiological incident.

ORD Collaborates with the Department of Defense to Help Drinking Water Systems Detect Drinking Water Contamination

As part of DoD's Technical Support Working Group (TSWG) efforts to commercialize detectors, DoD and ORD are collaborating on testing an on-line metal detector to determine its effectiveness in identifying cadmium and arsenic contamination in drinking water, a priority for water utilities. EPA, as the water sector lead, often leverages the work of other agencies to tailor successful products to the needs of the water utilities. The metal detector, developed by TSWG grant-recipient Quantitative BioSciences Inc., uses modified *Ecoli* to detect metal contamination in water. DoD requested the EPA preform testing prior to development of the commercial product. Testing will be conducted at the EPA-Cincinnati Test and Evaluation Facility.

Last week Highlights

Children's Lead Exposure paper

On September 12, ORD's [HYPERLINK "https://ehp.niehs.nih.gov/ehp1605/"] was published by *Environmental Health Perspectives*. It describes an innovative multimedia exposure-dose modeling approach for determining drinking water lead levels that can keep children's blood lead levels below specified values. The approach was developed to provide technical assistance to OW regarding possible revisions to the Lead and Copper Rule, considering the EPA National Drinking Water Advisory Council's 2015 recommendation of a "health-based, household action level" for lead in drinking water based on children's exposure. In the week since its publication, the article has gained some attention. In the first five days that the article was online, it was viewed nearly 500 times. The journal's news editor reports that this is higher than average for new publications. HUD, California EPA, and several international agencies have expressed interest in further discussing the published approach. And on September 14th, Environmental Defense Fund's Health Blog published an article about the publication. The article, [HYPERLINK "http://blogs.edf.org/health/2017/09/14/new-epa-model-lead/?utm_source=EDF+Health&utm_campaign=48f2460d30-RSS_EMAIL_CAMPAIGN&utm_medium=email&utm_term=0_4d0debabb0-48f2460d30-101618261"], summarizes the paper and explains the importance of the research.

Air Monitoring Project in Phoenix, AZ

On September 13, ORD circulated a concept paper for a potential air monitoring project in Phoenix, AZ, based on ideas from EPA staff in ORD, OAR, and Region 9. This concept paper was shared with a small group in EPA, the Arizona Department of Environmental Quality, and staff from Congressman David Schweikert's office. The proposed pilot project may focus on how information from an array of low cost air sensors compares to the more expensive regulatory air monitors.

Draft Handbook for Citizen Science Quality Assurance

On September 18, EPA began reaching out to external citizen science groups for feedback on a draft Handbook for Citizen Science Quality Assurance. The team is first seeking input from state and territorial environmental agency leaders from ECOS on how the written guidance, developed by EPA ORD, Region 1, and OEI, can help citizen science practitioner groups better understand and document data quality to meet their intended use. After gathering feedback from ECOS, the team will continue outreach to other external citizen science and community organizations for feedback.

Scientific Advisory Committee on Alternative Toxicological Methods

September 18-19 ORD participated in the Scientific Advisory Committee on Alternative Toxicological Methods (SACATM) 2017 meeting, hosted at the NIH facilities in Bethesda. The committee was reviewing and providing expert advice on using new chemical evaluation approaches developed and used by Toxicology in the 21st Century Federal collaboration (Tox21). ORD provided an overview of the new Tox21 Strategic plan. SACATM is a federally chartered advisory committee for the Interagency Coordinating Committee on the Validation of Alternative Methods (ICCVAM), the NTP Interagency Center for the Evaluation of Alternative Toxicological Methods (NICEATM), and the NIEHS Director.

Association of State and Territorial Health Officials Policy Summit

ORD participated in the Association of State and Territorial Health Officials (ASTHO) Policy Summit, September 19 in Washington, DC. Dr. Bruce Rodan presented along with Dr. Patrick Breysse (Director, NCEH/ATSDR) at the Leader to Leader Executive Roundtable Session on *Safe Drinking Water and other Environmental Health Issues*. The Environmental Health Policy Committee met in the afternoon to hear updates from CDC and EPA partners, discuss ASTHO's Strategic Plan, and set priorities and actionable items for the 2017-18 year, including water and its impacts on health, food safety, healthy communities, climate and health, and environmental health surveillance and biomonitoring. The Policy Summit was followed by [HYPERLINK "http://my.astho.org/asthoannualmeeting/home"] Annual Meeting [HYPERLINK "x-apple-data-detectors://1"], themed *Celebrating the Power of State and Territorial Public Health,* highlighting the decades of progress in governmental public health and ideas for addressing future public health challenges, including sessions about the opioid epidemic and creating a culture of health.

EPA Awards $1.6 Million to Small Businesses to Support the Development of Environmental Technologies

This week, the Agency announced $1.6 million in funding for 15 small businesses under EPA's Small Business Innovation Research (SBIR) program. The funds will advance the development of technologies that will help protect human health and the environment by detecting chemicals in the air, ensuring cleaner water, and creating greener materials. Fifteen companies are receiving Phase I contracts from EPA's SBIR program, which awards contracts annually through a two-phase competition.

Office of Policy Support

On September 20th, ORD will meet with OP to provide scientific and technical support on recent epidemiologic evidence for associations between long-term PM2.5 exposure and mortality. Specifically, they will discuss the results of the recent Medicare study published in the New England Journal of Medicine (Di et al. 2017), and provide context for those results within the larger body of scientific evidence.

EPA Tools and Resources Webinar

"Village Blue" was the topic of ORD's monthly public webinar on September 20 for states, tribes and others. The webinar featured an overview of how the Village Blue demonstration project complements

work that a number of state and local organizations are doing to make Baltimore Harbor "swimmable and fishable" by 2020. The project is designed to provide real-time water quality monitoring data to the Baltimore community and increase public awareness about local water quality in Baltimore Harbor and the Chesapeake Bay.

Decision Analysis for a Sustainable Environment, Economy, and Society Tool

On September 21, In collaboration with Region 6, ORD researchers and partners will conduct a workshop on the[HYPERLINK "https://cfpub.epa.gov/si/si_public_record_report.cfm?dirEntryId=240510"]. DASEES is an open-source, web-based decision analysis framework being developed by EPA, university, and private company researchers. It focuses on sustainable systems and communities. The workshop will provide participants with hands-on experience with the DASEES tool in preparation for subsequent workshops with dairy farmers to develop potential options for addressing water quality problems and approaches to sustainable and resilient dairy operations. The goal is to help farmers identify innovative and economically viable solutions for nutrient and sediment runoff control. The workshop will be attended by the Commissioner of Louisiana's Department of Agriculture and Forestry, Louisiana Department of Environmental Quality, Louisiana Department of Health and Hospitals, Louisiana State University, U.S. Department of Agriculture Natural Resources Conservation Service, and Region 6.